

AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1-7. (Cancelled)

8. (New) A method of managing a plurality of queues of received packets, the method comprising:

sequentially inserting said packets into a circular first-in-first-out memory scheme; and

selectively associating said packets with said plurality queues.

9. (New) The method of claim 8 comprising removing said packets from said memory scheme according to said plurality queues.

10. (New) The method of claim 8, wherein said plurality of queues comprises a plurality of independent first-in-first-out queues.

11. (New) The method of claim 8, wherein sequentially inserting said packets comprises:

inserting a start of a packet at a memory word indicated by a write pointer; and

advancing said write pointer to indicate a memory word located after a memory word containing an end of said packet.

12. (New) The method of claim 11, wherein sequentially inserting said packets comprises advancing a delete pointer jointly with said write pointer such that an empty zone of a predetermined length is maintained between said write pointer and said delete pointer.

13. (New) The method of claim 12 comprising dropping an indicated packet corresponding to a memory word indicated by said delete pointer, if said indicated packet is linked to one of said plurality of queues.

14. (New) The method of claim 13 comprising determining if said indicated packet is linked to one of said plurality of queues by comparing a location of the memory word

indicated by said delete pointer to a location indicated by a head pointer of a queue associated with said memory word.

15. (New) The method of claim 13 comprising determining a queue associated with said memory word based on information associating between a plurality of memory words and said plurality of queues.
16. (New) The method of claim 8, wherein said associating comprises updating queue information associating between said packets and said plurality of queues.
17. (New) The method of claim 16, wherein updating said queue information comprises updating queue information corresponding to a packet being inserted into said memory scheme.
18. (New) The method of claim 16, wherein updating said queue information comprises updating queue information corresponding to a packet being removed from said memory scheme.
19. (New) The method of claim 16, wherein said queue information comprises one or more values corresponding to at least one of a header pointer of a queue, a tail pointer of said queue, and a link pointer linking between two consecutive packets of said queue.
20. (New) The method of claim 8, wherein a capacity of said memory scheme is predetermined based on an expected rate for receiving said packets into said memory scheme.
21. (New) A system for managing a plurality of queues of received packets, the system comprising:
 - a circular first-in-first-out memory scheme to sequentially store said packets;
 - and
 - a memory manager able to associate said packets with said plurality of queues.
22. (New) The system of claim 21, wherein said memory manager is able to remove said packets from said memory scheme according to said plurality of queues.

23. (New) The system of claim 21, wherein said plurality of queues comprises a plurality of first-in-first-out queues.
24. (New) The system of claim 21, wherein said memory scheme comprises a write pointer to indicate a memory word for inserting a word of a received packet.
25. (New) The system of claim 24, wherein said memory scheme comprises a delete pointer to be advanced jointly with said write pointer such that an empty zone of a predetermined length is maintained between said write pointer and said delete pointer.
26. (New) The system of claim 25, wherein said memory manager is able to drop an indicated packet corresponding to a memory word indicated by said delete pointer, if said indicated packet is linked to one of said plurality of queues.
27. (New) The system of claim 26, wherein said memory manager is able to determine if said indicated packet is linked to one of said plurality of queues by comparing a location of the memory word indicated by said delete pointer to a location indicated by a head pointer of a queue associated with said memory word.
28. (New) The system of claim 26, wherein said memory manager is able to determine a queue associated with said memory word based on information associating between a plurality of memory words and said plurality of queues.
29. (New) The system of claim 21, wherein said memory manager is able to update queue information associating between said packets and said plurality of queues.
30. (New) The system of claim 29, wherein said memory manager is able to update queue information corresponding to a packet being inserted into said memory scheme.
31. (New) The system of claim 29, wherein said memory manager is able to update queue information corresponding to a packet being removed from said memory scheme.
32. (New) The system of claim 29, wherein said queue information comprises one or more values corresponding to at least one of a header pointer of a queue, a tail pointer of said queue, and a link pointer linking between two consecutive packets of said queue.

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33. (New) The system of claim 21, wherein a capacity of said memory scheme is predetermined based on an expected rate for receiving said packets into said memory scheme.